DOCUMENT RESUME

ED 196 303 FL 012 083

AUTHOR Dunlea, Anne D.
TITLE Observations on the Acquisition of Definiteness and Indefiniteness. Papers and Reports on Child Language Development, Number 15.
INSTITUTION Stanford Univ., Calif. Dept. of Linguistics.
PUB DATE Aug 78
NOTE 11p.: Not available in paper copy because of small type size.

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Child Language; Error Analysis (Language); *Language Acquisition; Language Research; Pragmatics; Preschool Children; Psycholinguistics; Syntax
IDENTIFIERS Articles (Grammar)

ABSTRACT

This study documents the emerging ability of children to use demonstrative expressions and definite and indefinite articles in order to establish a clear reference for the hearer in a natural discourse situation. The analysis is based primarily on transcripts of twins recorded over a period of nine months when they were 33 to 42 months old. Additional data are drawn from conversations of three other children interacting with siblings aged 3 years to 5 years 4 months. Each transcript was coded and analyzed for errors and omissions. It was found that children rarely made errors in using the determiners: the errors occurred in omitting them. The results of the analyses show a clear, four-stage progression in the acquisition of determiners. It appears that the stages in the acquisition of definiteness and indefiniteness are marked by three characteristics: (1) indefinite articles are used throughout the data; (2) expressions which would require demonstrative determiners and definite articles in adult language are absent in the first stage of child language; and (3) several potential uses of the definite articles are unexploited in the children's language. A question remaining to be considered is that concerning strategies inherent in article usage. (AMH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Stanford Dept. of Linguistics
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

1978

78

ED196303

OBSERVATIONS ON THE ACQUISITION OF DEFINITENESS AND INDEFINITENESS*

Anne D. Dunlea
University of Southern California

Certainly one of the most significant measures of communicative competence is the ability of the speaker to establish a clear reference for the hearer. In doing so, both linguistic and paralinguistic tools available in a particular discourse situation are exploited. Deictic gestures and words occur early in children's language literally functioning to point out references (Clark, 1976; Atkinson, 1978; Griffiths, 1974; Carter, 1975). A more subtle and sophisticated strategy for referring involves the use of definite and indefinite descriptions (Brown, 1973; Maratsos, 1976).

This study documents the emerging ability of children to use demonstrative expressions and definite and indefinite articles to establish a clear reference for the hearer in a natural discourse situation.

The analysis is based primarily on transcripts made by E. O. Keenan of twins recorded over a period of 9 months (33 mos - 42 mos). Additional data are drawn from naturalistic conversations of three other children interacting with siblings: 3 ys, 4 ys 5 mos, and 5 ys 4 mos. The transcripts are of audio-visual tapes and contain considerable detail about context and non-verbal behaviors. In addition, the original tapes were made available to me for this study.

Clark (1978) points out that deictic terms involve shifting reference which makes them exceptional to the child since they are the only case where "name" doesn't go with the object designated. In the case of English deictics children must discover that shifting reference turns on who the speaker is, thus permitting an ego-centric strategy. I can say, "I want that chair there," pointing to a chair which is only a few inches from my addressee but which is across the room from me. The early use of the deictic adverbial there is understandable precisely because it centers exclusively on the speaker (ego). The well documented early development of such expressions by children is not surprising.

Demonstratives and the definite and indefinite determiners in English are also cases of "shifting reference," but they do not

*I would like to thank Jack Hawkins and Elinor Keenan for their suggestions and comments on an earlier version of this paper.

FL 012 063

Stanford Univ. Dept. of Linguistics
Papers and Reports on Child Language Development, Number 15

depend on the location of the speaker but rather they require the speaker to be conscious of her own knowledge about the referent and more crucially, to determine what knowledge she can reasonably expect her addressee to share or to glean from the discourse situation. Such references involve clearly non-egocentric strategies.

The developmental literature to date draws heavily on the anaphoric use of definites and is based on a notion which equates "definiteness" with "specificity." The definite article occurs only when a reference is "specific" for both speaker and hearer (Brown, 1973; Maratsos, 1976).

The ability to use demonstrative, definite and indefinite determiners requires a complex strategy involving a knowledge of syntactic, pragmatic and logical regularities which are not adequately captured in a system which equates definiteness with specificity.

For example, the specificity principle cannot adequately predict the use of a definite determiner in a first mention situation with reference-establishing modifers (cf. Hawkins, 1978). Instances of these modifiers are illustrated below.

Moreover, the specificity classification entirely fails to consider the position of demonstrative determiners (this and that) which, as we shall see, is crucial in a developmental study.

The various usage possibilities of the determiners is clearly analyzed by Hawkins in a framework which not only defines the oppositions between definite and indefinite descriptions, but also defines the functional differences between definite articles and demonstratives (1977 a & b, 1978). Further, the usage types which are fundamentally similar are subsumed under higher level abstract generalizations.

The major usage types for the definite article are listed below together with examples of appropriate adult uses:

1. Anaphora
   I have previously told you about a funny dog: "I saw the funny dog again today."

2. Immediate Situation
   The referent exists in the situations in which the speech act occurs.
   May be visible: "Please give me the bucket."
   Need not be visible: "Don't go in there, the dog will bite you."

3. Larger Situation
   Knowledge about the kinds of objects which exist in various

larger situations is required and the immediate situation of the speech act is exploited to predict which larger situation the referent is to be located in:
"The President has been impeached."
"The school is on fire."

4. Introductory Visible Situation
   (in a car) "That's the steering wheel."
   (not in a car) "That's a steering wheel."

5. Associative Anaphora
   Used if there is a part-of relationship between objects, or if certain objects predictably co-occur:
   "Mary just bought a new house only to find the roof was leaking."
   "I just came back from Old MacDonald's farm, the cows have been stolen."

6. First Mention with referent establishing modifiers
   Relative: "Where's Mary?" "The guy she's dating is in town so she can't make it."
   Associative: "The beginning of the movie was violent."
   NP Complement: "The Martian was surprised by the fact that humans can talk."
   Adj & N Modifiers: "I like the color green." "I like the film "Julia."

There is a partial overlap between demonstrative and definite determiners in two usage types. The major demonstrative types are illustrated below:

1. Anaphora
   "I saw that funny dog again today."

2. Immediate Situation
   Referent must be visible: "Please give me that bucket." "Watch out for that dog."

Demonstratives draw the hearer's attention to a referent and instruct the hearer to match this linguistic referent with some identifiable object which is either visible or known on the basis of prior discourse. Demonstratives also share an identifying function with the deictic adverbials here and there.

Similarly, the definite article draws attention to a referent but it involves a pragmatic strategy which consists of matching a referent with a whole set of objects rather than identifying an object as such in the world. That is, a regularity holding for ALL uses of the definite article involves simply the identification of a set within which the hearer understands that the referent exists, within which he must mentally locate the referent (cf. Hawkins, 1978).

Further, the definite article must refer to all objects which satisfy the description of the referring expression in a particular pragmatically defined set of objects ("Inclusiveness Principle").

Indefinite descriptions (with a and the plural form some) are neutral to the pragmatic presuppositions of both the definite article and demonstratives. Further, it refers to only some of the potential referents of the referring predicate, ("Exclusiveness Principle").

Previous studies have not drawn on a thorough linguistic analysis of the type presented above and this has led to an incomplete understanding of children's emerging ability to use definite, demonstrative and indefinite determiners in establishing reference.

Methodology

Each transcript was analyzed so that all uses of demonstrative, definite and indefinite determiners were coded according to the categories proposed by Hawkins. In addition, the category 'Recitation Definite' was added to cover such tokens as 'in the treetop' or 'here's the church' which are a product of rote memorization (eg. nursery rhymes, songs, etc.)

Each transcript was also analyzed for errors and omissions. Any utterance occurring in the transcripts which contained no referring expression or which contained an inappropriate one was categorized by the nature of the error or omission. In an effort to check reliability of judgements, samples of conversation from each transcript were analyzed by 26 native speakers of English enrolled in an introductory linguistics class at USC. Portions of the transcript were reproduced without determiners. Subjects inserted the "correct" determiner for each of 25 samples. The agreement was 100%.

All utterances except sound games were coded. If other grammatical errors made it impossible to determine the appropriate NP the utterance was considered unintelligible and was not analyzed. This happened in only a few cases.

Analysis

Contrary to previous findings, I found that the children rarely made errors in actually using the determiners. When an article or demonstrative was used it was almost invariably used correctly. 456 utterances containing demonstrative pronouns, and demonstrative, definite and indefinite determiners were analyzed and only three errors were found. It is the nature of the omissions which tells the story: 246 determiners were omitted. Previous studies considering the production of articles have not analyzed omissions.

The results of the analysis show that there is a clear progression in the acquisition of determiners involving four stages. Table 1A, below, indicates the frequency of referring expressions used across the various usage types for each of the four stages. Table 1B shows the frequency of expressions omitted. In addition, Table 2, following "analysis" presents the total productive use of the definite and indefinite articles for each stage.

STAGE I The data for September and October represents the first stage. The first thing we notice is that the children fail to use any determiner at all in half of their referring noun phrases. When a determiner is used, it is normally an indefinite article. In a total of 108 referring NPs, including pronominal use of demonstratives, 49 (or 45%) of them use the indefinite article. This is even greater than the use of deictic pronouns which account for 29% of the corpus (32 utterances). The children use the indefinite description in a variety of structures, both referential and predicate nominal, suggesting that they are aware of appropriate usage types. We find expressions such as /oh/ a bee/; /some fishes/; and /I got/ a big one/. Yet they still omit the indefinite article in 60% of the potential uses as required in the adult language.

Demonstratives are most often used as pronouns, as in: 'what's that?' 'do that,' 'I do that,' and 'see this.' When demonstratives are immediately followed by a (modifier) noun sequence, intonation suggests that they are not in fact functioning as determiners but as pronouns: 'that piggy' 'that doggie bib' Nine uses of the demonstrative are for immediate situation references, while only three are anaphoric.

The definite article is almost never used. The only clear productive use,/on da ceiling/, is a pragmatically appropriate use exploiting the immediate situation of utterance. What is most striking is that the expressions which require definite determiners in adult English are conspicuously absent. Table 1B shows that definite NPs could potentially have been used, but were omitted, in only 7 instances -- and all 7 were recitation definites which are not productive uses.

STAGE II In stage II (November) the indefinite article is omitted from 40% of its potential uses. There is a decrease in deictic demonstrative pronouns and the first real appearance of expressions which require demonstrative determiners and the definite article. Demonstratives are used deictically only twice in 81 utterances (2.5%) though their use as genuine determiners rather than pronouns is still rare. The data for omissions indicate that now almost half of the omissions involve demonstratives or the definite article.

TABLE 1A FREQUENCY OF EXPRESSIONS USED

	I	II		III		IV
	Sept.	Oct.	Nov.	Dec.	May	
Definites						
Anaphora	0	0	0	0	1	11
Immediate Situation	2	0	0	0	5	18
Larger Situation	0	0	0	0	0	0
Associative	0	0	0	0	3	5
Recitation Definite	3	1	0	13	0	0
Demonstratives						
Anaphora	3	2	7	3	0	6
Immediate Situation	9	7	43	38	46	14
Pronominal	26	6	2	3	2	9
Indefinites	32	17	29	40	21	29
Total Referring NPs used correctly	75	33	81	97	78	92

TABLE 1B FREQUENCY OF EXPRESSIONS OMITTED

	I	II		III		IV
	Sept.	Oct.	Nov.	Dec.	May	
Definites						
Anaphora	0	0	0	0	0	1
Immeidate Situation	0	0	0	0	0	0
Larger Situation	0	0	1	3	0	1
Associative	0	0	0	2	7	2
Recitation Definite	7	0	2	2	0	0
Definite or Demonstrative	15	7	13	29	32	0
Demonstrative						
Anaphora	0	0	0	0	0	0
Immediate Situation	0	1	2	0	1	0
Indefinites	54	21	19	12	12	0
Total referring NPs with omitted dets	76	29	37	48	52	4

STAGE III In December, the omission of the indefinite article drops to 28%. Moreover there is an increase in the use of demonstratives as determiners: /out that window/; /that thing/; /I get this tractor and ride this one/ and so on. Notice too, that there emerge more utterances which can potentially take a definite article or demonstrative in the adult language. There are now structures where a definite article should be used but isn't. For example, there are 3 omissions of the definite article in December for larger situation reference; 2 for associative reference and 29 for immediate situation reference, although these overlap in part with potential uses of demonstrative determiners.

In the May transcript we find a few examples of the definite article being used in several of the major usage functions, but 42% of the time the definite or demonstrative determiners are still omitted. What is interesting at this stage is that when the definite and demonstrative determiners are omitted their place is regularly marked with prosodic features. There were 40 omissions of these determiners in May of which 33 were either immediate situation or anaphoric uses. All of these were marked intonationally by maintaining a high pitch throughout the NP and by using a contrastive low pitch for the predicate. Even more striking, there was an audible pause in 17 of the structures (55%) where the determiner should have been expressed but was omitted. A few illustrative examples of this are: /well I didn't pee on--floor/; /I was g: ask--farmer/; /should we go to:: --sweety shop?/, (the dashes indicate pauses). The seven omissions of associative use were not marked by either pause or intonation.

The last month of the longitudinal data is still stage III, but the prosodic markings anticipate later development.

STAGE IV The total omission rate for determiners is now only 5%. There are no instances of omission for indefinite articles. A clear opposition has emerged between the definite and demonstrative determiners. For example, referents of demonstrative descriptions are always visible, but the referents of definite descriptions may or may not be visible. Expressions requiring the definite article for associative references are very rare and there are no expressions in which the definite article could potentially have been used for larger situation references or as a first mention NP with reference establishing modifiers.

TABLE 2 PRODUCTIVE USE OF INDEFINITE AND DEFINITE DETERMINERS

	Number of potential uses[a]	Number used	Number omitted	% Omitted
Stage I				
Indefinite	124	49	75	60%
Definite[b]	2	2	0	0
Stage II				
Indefinite	48	29	19	40%
Definite	1	0	1	100%
Stage III				
Indefinite	86	61	24	28%
Definite	21	9	12	57%
Stage IV				
Indefinite	29	29	0	0
Definite	38	34	4	10%

[a] Potential uses of the determiners in referring NPs as required in adult speech.

[b] Recitation definites are excluded here because they do not represent productive forms.

Conclusions

We can summarize the analysis by noting that the stages in the acquisition of definiteness and indefiniteness are marked by three characteristics. First, indefinite articles are used throughout the data. Initially they are omitted from more than half of the potential uses as required by adult language. There is a steady decrease in these omissions to zero.

Second, expressions which would require demonstrative determiners and definite articles in the adult language are absent in the first stage. The predominant initial function of demonstrative and definite determiners are immediate situation references, which exploit the environment of discourse. But even these determiners are frequently omitted from their potential uses. Use of the demonstrative determiner precedes that of the definite article and a clear opposition between the two is not obvious until the fourth stage. In stage III there is a high rate of omission for definite and demonstrative determiners, but their places are regularly marked prosodically in anaphoric and immediate situation uses. It is precisely these two uses of the definite article which are most attested in stage IV.

Third, several potential uses of the definite article which are present in adult language are unexploited in the children's language. There are no instances of larger situation references or of first mention uses of the definite article with reference establishing modifiers. Associative references, which are the most common adult use of the definite article (Hawkins, 1978), are rarely used by young children, but begin to emerge in stage IV.

We need to consider what might account for these trends.

Previous studies which have defined definiteness on the notion of speaker/hearer specificity suggest that children make errors in the use of determiners because of the egocentricity of their speech (cf. discussion above). This will explain the indefinite article facts, but not the demonstrative and definite facts. We need to consider the strategies inherent in the article usage types in order to explain all of the findings of this study.

1. The indefinite article is used early because it is neutral to hearer sensitivity and indeed because it does permit egocentric reference strategies.

2. The developing use of definite articles and demonstratives seems most adequately explained in terms of their increasing logical, syntactic and semantic complexity. The earliest usage type, immediate situation references, simply exploits the environment of the discourse. Demonstrative references are conceptually simpler than definite references since their referents are always visible.

Anaphoric uses of the determiners involve a more subtle linguistic strategy. The hearer is instructed to identify a unique object from his memory store. In order to do this he must often ignore similar referents that are not shared with the current interlocutor and must scan the objects shared with that speaker in order to find a single unambiguous referent.

The associative use of the definite article, a house, the roof, involves knowledge of a general association between houses and roofs together with the logical inference that 'the roof' in question is in fact 'the roof' of the previously mentioned 'house.'

3. The referring expressions which are unexploited in the children's language are the most complex. Associative expressions are infrequently used. There are no larger situation uses of the. These presuppose that the hearer shares general knowledge of the existence of an entity in some situation and requires computation of what larger situation the referent is to be located in. The first mention use of the definite determiner with referent establishing modifiers is also unattested. These require syntactic constructions which are not common in young children's speech--4 year olds rarely

use relative clauses.

This paper demonstrates the importance of considering not only errors in actual use but also the omission of constructions in documenting the emergence of particular structures in children's speech. Further, it demonstrates the necessity of considering a broad range of factors in understanding children's developing communicative competence.

The findings of this study are consistent with our general understanding of children's linguistic development. The acquisition of definiteness begins with the exploitation of the immediate environment and becomes progressively more complex, demanding greater world knowledge and the use of subtler linguistic and cognitive strategies.

REFERENCES

Atkinson, Martin. "Prerequisites for Reference." To appear in E.O. Keenan, Studies in Developmental Pragmatics, New York: Academic Press, 1978.

Brown, Roger. A First Language. Cambridge, Mass.: Harvard University Press, 1973.

Carter, A. L. "The Transformation of Sensory Motor Morphemes into Words," In Papers and Reports on Child Language Development, 1975, 31-47.

Clark, E. V. "From Gesture to Word, On the Natural History of Deixis in Language Acquisition." In J.S. Bruner & A. Garton (Eds.) Human Growth and Development: Wolfson College Lectures 1976, Oxford: Oxford University Press, 1978.

Griffiths, P. "That There Deixis I: That." Unpublished paper, University of York, England, 1974.

Hawkins, J. A. "The Pragmatics of Definiteness." Linguistische Berichte, 1977, 47 & 48.

Definiteness and Indefiniteness: A Study in Reference and Grammaticality Prediction, Atlantic Heights, N.J.: Humanities Press and London: Croom Helm, 1978.

"On Explaining Some Ungrammatical Sequences of Article & Noun in English." Chicago Linguistic Society, 1976, 12.

Maratsos, M. P. The Use of the Definite and Indefinite Reference in Young Children, Cambridge: Cambridge University Press, 1976.